

REMARKS

In accordance with the foregoing, claims 17-29 are amended. No new matter is being presented, and approval and entry of the amended claims are respectfully requested.

Claims 1-21 are pending and under consideration.

Claims 17-19 are rejected under 35 U.S.C. §102(b) as being anticipated by Lee et al. (U.S.P. 5,921,095); claims 1-3, 5, 7, 12-13, 15-16 and 20-21 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lee; claims 4 and 14 are rejected under 35 U.S.C. §103(a) as being unpatentable over Lee in view of Park et al. (U.S.P. 6,412,286); claim 11 is rejected under 35 U.S.C. §103(a) as being unpatentable over Lee in view of Shelton et al. (U.S.P. 5,722,244) and further in view of Kobayashi et al. (U.S.P. 4,795,088).

The rejections are traversed.

CLAIM AMENDMENTS

Independent claim 17, and dependent claims 18-19, are amended to recite a method of refrigeration including "connecting at least one second detachable, stackable cooling cabinet to the first cooling cabinet." (See, for example paragraph 0045 and FIGs. 1-4).

No new matter is being presented, and approval and entry of the amended claims are respectfully requested.

ITEM 2: REJECTION OF INDEPENDENT CLAIM 17 (AND DEPENDENT CLAIMS 18-19) UNDER 35 U.S.C. §102(b) AS BEING ANTICIPATED BY LEE

The Examiner rejects independent claim 17, and dependent claims 18-19, under 35 U.S.C. §102(b) as being anticipated by Lee. (Action at page 2).

In contrast to the cited art, independent claim 17, as amended, recites a method of refrigeration including "seating a first cooling cabinet . . .; and connecting at least one second detachable, stackable cooling cabinet to the first cooling cabinet." (Emphasis added.)

Lee does not teach a method of refrigeration including connecting a detachable, "stackable" cooling cabinet. Instead, Lee merely teaches units that are mounted against each other. (See, for example, FIGs. 6-7) Lee further teaches attachment of units in only a side-by-side arrangement with clamps 14 and bracket 15. (See, for example, FIGs. 8-9). For example, Lee discusses (col. 5, lines 20-35):

. . . clamps 14a are attached on the upper surface of the machinery section 10 formed in the upper portion of one refrigerating unit and the rear surface of the refrigerating unit, respectively, and a plurality of clamp hangers 14b are attached to the portions of another refrigerating unit, . . . the neighboring insulation members 12

closely contact with each other, for thus forming the expandable refrigerator according to the present invention.

(Emphasis added).

Conclusion

Since features of independent claim 17 (and dependent claims 18-19) are not taught by the cited art, the rejection should be withdrawn and claims 17-19 allowed.

ITEM 4: REJECTION OF INDEPENDENT CLAIMS 1, 12, AND 20 (AND RESPECTIVE DEPENDENT CLAIMS 2-3, 5 AND 7, CLAIMS 13 AND 15-16, AND CLAIM 21) UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER LEE

The Examiner rejects independent claims 1, 12, and 20 (and respective dependent claims 2-3, 5 and 7, claims 13 and 15-16, and claim 21) under 35 U.S.C. §103(a) as being unpatentable over Lee. (Action at pages 2-3).

Independent claims 1 and 12 recite a sectional refrigerator "wherein the plurality of cooling cabinets are detachably connectable to each other in any orientation." (Emphasis added).

Independent claim 20 recites a sectional refrigerator including "a plurality of stackable cooling cabinets detachably connectable from each other in any orientation, stackable, and having storage compartments with doors." (Emphasis added).

The Action concedes that Lee does not teach that the cooling cabinets can be oriented in any direction. (Action at page 3).

The Examiner contends however that since Lee teaches:

. . . it is possible to easily change the shape and capacity of the expandable type refrigerator based on the installation site environment (col. 7, lines 1-10). Therefore, it would have been obvious . . . to modify the system by being able to orient the cabinets in any direction in order to improve the accessibility of the freezer/cooler units.

(Action at page 3).

Applicants submit, however, that Lee does not teach or suggest cooling cabinets are detachably connectable to each other in any orientation. Rather, Lee, teaches away from cabinets connectable in any orientation, for example, on top of one another. Instead, Lee merely teaches units that are mounted against each other. (See, for example, FIGs. 6-7). Lee further teaches brackets and clamps for only mounting units against each other so that (col. 5, 31-33) "neighboring insulation members 12 (that are on the sides of the units) closely contact with each other."

In addition, Lee does not teach or suggest, nor does the Examiner discuss the feature recited by independent claim 20 of a "stackable" cabinet. The methods of attachment of units as taught by Lee teach away from a "stackable" cabinet.

Further, Lee does not teach or suggest features as recited by the dependent claims. For example, dependent claim 13 recites "the plurality of cooling cabinets comprises a plurality of layers of cooling cabinets."

Lee in fact teaches away from "layers" of cooling cabinets by teaching units that are attached only side-by-side.

Conclusion

Since features recited by independent claims 1, 12, and 20 (and respective dependent claims 2-3, 5 and 7, claims 13 and 15-16, and claim 21) are not taught or suggested by the cited art and *prima facie* obviousness is not established, the rejection should be withdrawn and claims 1-3, 5, 7, 12, 13, 15, 16, and 20-21 allowed.

ITEM 5: REJECTION OF DEPENDENT CLAIMS 4 AND 14 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER LEE IN VIEW OF PARK

The Examiner rejects dependent claims 4 and 14 under 35 U.S.C. §103(a) as being unpatentable over Lee in view of Park.

Dependent claims 4, and 14, recite a sectional refrigerator wherein the cool air generating part includes "thermoelectric semiconductor elements" respectively provided in the cooling cabinets.

The Action concedes that Lee does not teach "use of a thermoelectric semiconductor as a cooling element." (Action at page 4). The Examiner contends, however, that it is obvious to modify Lee in view of Park to "reduce the size of the system." (Action at page 4).

Applicants submit there is no motivation stated by Lee to combine the cited in a manner as suggested by the Examiner, and no reasonable expectation of success if *arguendo* combined.

Lee teaches (col. 4, lines 34-36) that the "machinery section 10 in which a compressor (not shown) is installed is formed in an upper portion of a left refrigeration unit 100 which is adapted to be expanded." Lee further teaches that discusses (col. 5, lines 30-35) "the neighboring insulation members 12 closely contact with each other, for thus forming the expandable refrigerator."

Park, on the other hand, teaches (col. 3, lines 50-62):

. . . thermoelement 20 is installed in the rear wall of the inner casing 11 . . . The inner casing is housed by an outer casing. . . the inner and outer casings 11 and 12 are assembled together such that a gap is defined between them and is filled with urethane foam to form the insulation wall.

Applicants submit that there is no motivation stated in Lee to use an internally contained thermoelement as taught by Park, and even if *arguendo* combined there is no reasonable expectation of success as park teaches thermoelements within an inner an outer casing and as such teach away from the teaching of Lee of neighboring insulation members of units.

Conclusion

Since there is no stated motivation in the art to combine in a manner as suggested by the Examiner, no reasonable expectation of success if *arguendo* combined, and *prima facie* obviousness is not established, the rejection should be withdrawn and dependent claims 4 and 14 allowed.

ITEM 6: REJECTION OF DEPENDENT CLAIMS 6 AND 8-10 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER LEE IN VIEW SHELTON

Dependent claim 6 recites a sectional refrigerator wherein the "component chamber is separate from the cooling cabinet." (Claims 8-10 are dependent on parent claim 6).

The Action concedes that Lee does not teach "the compressor-condenser- expansion valve circuit is separated from the main system, coupled to the cooling units via ducts." (Action at page 4).

The Examiner contends, however, that Shelton teaches "the use of a separated circuit for the compressor (80)-condenser (82)-expansion valve (90) portion (FIG. 6), coupled to the cooling units via duct (col. 7, lines 17-20)." (Action at page 4).

Applicants submit that neither Lee or Shelton, alone in combination teach a "component chamber is separate from the cooling cabinet." The Action concedes that Lee does not teach a circuit separated from a main system. Further, Shelton does not teach a "separated circuit" as the Examiner contends. FIG. 6 of Shelton merely teaches (col. 5, starting at line 50) a "schematic drawing" for components of the refrigeration circuit in Shelton's "modular" ice cube maker.

Conclusion

Since features of dependent claim are not taught by the cited art alone or in combination, the rejection should be withdrawn and dependent claims 6 and 8-10 allowed.

ITEM 7: REJECTION OF DEPENDENT CLAIM 11 UNDER 35 U.S.C. §103(a) AS BEING UNPATENTABLE OVER LEE IN VIEW SHELTON AND KOBAYASHI

The Examiner rejects dependent claim 11 under 35 U.S.C. §103(a) as being unpatentable over Lee in view Shelton and to Kobayashi. (Action at page 5).

Dependent claim 11 recites that "the compressor, the condenser, the electronic expansion valves, and the evaporators form a refrigeration cycle, and the refrigeration cycle further comprises an inverter circuit."

The Action concedes that these features are not taught by Lee in view of Shelton. The Examiner contends that Kobayashi teaches the use of an inverter, and it is obvious to modify Lee so as not to exceed the initialized maximum capacity which has been predetermined (col. 5, lines 16-21).

Applicants submit there is no motivation stated in Lee to modify the units in a manner as suggested by the Examiner and no reasonable expectation success if *arguendo* combined in a manner as suggested by the Examiner. Lee teaches a system (See, for example, Figs. 12 and 13) in which various combinations for example "refrigerating + refrigerating +freezing" and "freezing+ refrigerating + refrigerating" are selectable. Applicants submit that there is no reasonable expectation of success of modifying Lee with an inverter circuit as taught by Kobayashi for controlling a speed an capacity of a blower to achieve such selectable combinations.

Conclusion

Since there is no stated motivation in the art to combine in a manner as suggested by the Examiner, no reasonable expectation of success if *arguendo* combined, and *prima facie* obviousness is not established, the rejection should be withdrawn and dependent claim 11 allowed.

CONCLUSION

There being no further outstanding objections or rejections, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge

the same to our Deposit Account No. 19-3935.

Respectfully submitted,

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